Tier 1 Accuracy Review Checklist

The following document is used to review Tier 1 Reports and conversions to Tier 1 Reports. The following questions are to be answered based on the information presented in the Tier 1 Report, SCR, and LUST file. Responses may fall into the following categories:

Y - YES. Information provided meets the qualifications as intended or presents the correct information.
N - NO.
N/A - Not Applicable
Unk - Unknown. Information insufficient to draw conclusion.
1- Information is inadequate
2- Information is inaccurate
3- Information not presented

LUST/Reg. No._____ Site Name/Location_____

Tier 1 Report Received_____ Date Tier 1 Review Completed_____

Reviewer:_____ Results of Review:_____Accepted_____Rejected

Comment letter date:_____ Tier 1 Classification:_____NFA_____Tier 2

Current Site Conditions (check applicable items, circle contaminant source)

_____Active USTs_____Inactive USTs_____Removed USTs
_____GasolineDiesel_____Waste Oil_____Other

Are commingled plumes present? Enter LUST numbers._____

Is free product present? No Yes - Type:_____
Date Discovered_____ Date of first FPRR_____ Date of last FPRR_____

Dominant Lithology (circle): Clay Silt/Clay Silt/Sand Sand Sand/Gravel
Gravel Bedrock-granular Bedrock-nongranular

Minimum depth to groundwater_____ Minimum depth to bedrock_____
Monitoring well #'s with SWL below unconsolidated/bedrock interface_____

Summary

File contains sufficient information to complete Tier 1 review? Y N
Comments/Summary/Action Items Needed(List):

_____
_____
_____
_____
_____

Summary of draft letters to be sent:

_____
_____
_____
_____

Maximum Soil and Groundwater Concentrations

☐ Acceptable ☐ Unacceptable (see below)

If TEH analysis is required for this site, has it been conducted?	Y	N	N/A	1	2	3
For SCR conversions, if TEH in soil exceeds the Tier 1 levels, has TEH in groundwater been analyzed?	Y	N	N/A	1	2	3
Have the source samples/locations been adequately identified?	Y	N		1	2	3

If not, identify the correct soil and groundwater maximums below.

Soil Maximums

Chemicals		Date of Sample	Well/ Boring #	Concentration (mg/kg)	Default used?	Source of information (closure, site check,etc.)	Date of Report
Group 1	B						
	T						
	E						
	TPH						
Group 2	TEH						

Groundwater Maximums

Chemicals		Date of Sample	Well/ Boring #	Concentration (ug/L)	Default used?	Source of information (closure, site check,etc.)	Date of Report
Group 1	B						
	T						
	E						
	X						
	TPH						
Group 2	TEH-d						
	TEH-wo						

Hydraulic Conductivity

☐ Acceptable ☐ Unacceptable (see below)

Have data and calculations used to determine K been provided?	Y	N	1	2	3
Based on the data and calculations provided and soil types present, is reported K value representative of site conditions?	Y	N	1	2	3

Explain why K value was recalculated:

_____

HYDRAULIC CONDUCTIVITY DATA

Reported K			Recalculated K (m/d)	Total Dissolved Solids	
Test Date	MW#	K(m/d)		MW#	TDS (mg/L)

Default Assumptions for K:

- 0.45 m/d at sites where reported K was not representative and cannot be recalculated.
- 5 m/d at exempt granular bedrock where K too high to measure.
- Reported or recalculated K at exempt granular bedrock where K >0.44 m/d.
- 0.44 m/d at exempt granular bedrock where reported or recalculated K was <0.44 m/d.

Default Assumption for TDS when not measured: <2500 mg/L.

Receptor Identification

☐ Acceptable ☐ Unacceptable (see below)

Well Survey

Was a well survey conducted within 1000' of contaminant sources?	Y	N	Unk	1	2	3
Was a property owner/ pedestrian survey conducted to locate wells within 300' of contaminant sources?	Y	N	Unk	1	2	3
Are drinking water wells present?	Y	N	Unk	1	2	3
Are non-drinking water wells present?	Y	N	Unk	1	2	3

Explain deficiencies:

Vapor to Enclosed Space Receptors

Explosive vapors have been reported in the past?	Y	N				

Spill Information:

Date_____Product Spilled_____Quantity_____IDNR Notified (circle) Y N Spill #_____

Was an explosive vapor survey of the nearest subsurface enclosed spaces in all directions and in places with a history of vapor problems conducted?	Y	N	Unk	1	2	3
An explosive vapor survey has been conducted using proper equipment?	Y	N	Unk	1	2	3
Explosive vapors are present?	Y	N				
Was a confined space survey conducted to a distance of 200' from the contaminant sources?	Y	N	Unk	1	2	3
Basements are present within 200' of the sources?	Y	N	Unk	1	2	3
Sanitary sewers are present within 200' of the sources?	Y	N	Unk	1	2	3

Explain deficiencies:

Was soil gas sampling conducted to clear soil vapor pathway?	Y	N	N/A	1	2	3
If SCR conversion, was soil gas sampling conducted to						
- clear the groundwater vapor pathway?	Y	N	N/A	1	2	3
- clear the soil leaching groundwater vapor pathway?	Y	N	N/A	1	2	3

Explain deficiencies:

Plastic Water Line Receptors

Is groundwater less than 20' beneath the surface?	Y	N		1	2	3
If yes, was a plastic water line receptor survey conducted to a distance of 200' from the sources?	Y	N	Unk	1	2	3
Are there any plastic water line mains within 200'?	Y	N	Unk	1	2	3
Are there any plastic water service lines within 200'?	Y	N	Unk	1	2	3

Explain deficiencies:

Surface Water Body Receptors

Was a surface water body receptor survey conducted to a distance of 200' from the contaminant sources?	Y	N	Unk	1	2	3
Is there a surface water body within 200 feet of the source?	Y	N	N/A	1	2	3
Was a petroleum sheen observed on the surface water body?	Y	N	N/A	1	2	3
Has the designation of surface water body been provided?	Y	N	N/A	1	2	3

Explain deficiencies:

I. TIER 1 REPORT BODY

Determine whether the following sections of the report have been adequately completed.

A. Title Page:	Y	N	N/A	1	2	3
Deficiencies:						
B. Site Data Summary (Page 2):	Y	N	N/A	1	2	3
Deficiencies:						
C. Pathway Evaluation Summary (page 3)	Y	N	N/A	1	2	3
Deficiencies:						
D. Tier 1 Report Checklist (page 4)	Y	N	N/A	1	2	3
Deficiencies:						
E. Site History (page 5)	Y	N	N/A	1	2	3
Deficiencies:						
E. Current Site Conditions (page 6)	Y	N	N/A	1	2	3
Deficiencies:						
F. Sampling Results (pages 7-10)						
1. Field Screening:	Y	N	N/A	1	2	3
2. Soil Analytical Data	Y	N	N/A	1	2	3
3. Groundwater Analytical Data	Y	N	N/A	1	2	3
4. Soil Gas Analytical Data	Y	N	N/A	1	2	3
5. Groundwater Elevations	Y	N	N/A	1	2	3
6. Hydraulic Conductivity	Y	N	N/A	1	2	3
Deficiencies:						
G. Receptor Survey (pages 11-12)						
1. Groundwater Well Survey	Y	N	N/A	1	2	3
2. Enclosed Space / Conduit Survey	Y	N	N/A	1	2	3
3. Surface Water Survey	Y	N	N/A	1	2	3
Deficiencies:						

II. APPENDICES

1. Topographic Map	Y	N	N/A	1	2	3
2. Site Plan Map	Y	N	N/A	1	2	3
3. Site Vicinity Map	Y	N	N/A	1	2	3
4. Field Screening Map	Y	N	N/A	1	2	3
5. Soil Contamination Maps	Y	N	N/A	1	2	3
6. Groundwater Contamination Plume Maps	Y	N	N/A	1	2	3
7. Groundwater Flow Direction Map	Y	N	N/A	1	2	3
8. Well Survey Map	Y	N	N/A	1	2	3
9. Enclosed Space and Conduit Map	Y	N	N/A	1	2	3

10. Surface Water Map	Y	N	N/A	1	2	3
11. Tank and Line Tightness Test Results	Y	N	N/A	1	2	3
12. Laboratory Data Sheets	Y	N	N/A	1	2	3
13. Soil Boring Logs	Y	N	N/A	1	2	3
14. Hydraulic Conductivity Measurements	Y	N	N/A	1	2	3
15. Well Logs	Y	N	N/A	1	2	3
16. Pathway Evaluation Worksheet (required if software not used)	Y	N	N/A	1	2	3

Appendix Deficiencies:_____

_____

III. CORRECTIVE ACTIONS

1. Declaration of Restrictive Covenants / Institutional Controls:						
Form is dated?	Y	N	N/A	1	2	3
Description of restrictions is provided?	Y	N	N/A	1	2	3
Name of declarant is entered?	Y	N	N/A	1	2	3
Authorizing agent affixed signature?	Y	N	N/A	1	2	3
Form is notarized?	Y	N	N/A	1	2	3
Legal description of property provided?	Y	N	N/A	1	2	3
Does institutional control prohibit/restrict use to appropriate distance from source?	Y	N	N/A	1	2	3
Ordinance accepted?	Y	N	N/A	1	2	3
2. Abandoned Water Well Plugging Records						
IDNR FORM 542-1226 complete?	Y	N	N/A	1	2	3
3. Water Supply (IDNR) / Designated County Agent Notification:						
IDNR form 542-1530 complete?	Y	N	N/A	1	2	3
Have site maps showing contamination been provided?	Y	N	N/A	1	2	3
4. Utility Company Notification						
IDNR form 542-1531 complete?	Y	N	N/A	1	2	3
Have site maps showing contamination been provided?	Y	N	N/A	1	2	3
5. Report of Plastic Water Line Removal and/or Relocation						
Report of the replacement/relocation provided as an Appendix to the Tier 1 Report?	Y	N	N/A	1	2	3
Documentation of Utility Company approval for replacement /relocation provided?	Y	N	N/A	1	2	3
If plastic water lines were replaced, are construction details (new pipe material, backfill material, burial depth) provided?	Y	N	N/A	1	2	3
Have relocated plastic water lines been moved at least 200 feet from contaminant sources?	Y	N	N/A	1	2	3
Documentation that relocation area is free of contamination has been provided?	Y	N	N/A	1	2	3
Construction details (backfill material, burial depth) of relocated plastic water lines are provided?	Y	N	N/A	1	2	3
Scaled site diagram which shows pertinent site features,						

soil and groundwater contamination, former and current location of plastic water lines, location of new non-plastic water lines provided?	Y	N	N/A	1	2	3
6. Report of Overexcavation Activities						
Report of the excavation provided as an Appendix to the Tier 1 report?	Y	N	N/A	1	2	3
Field screening conducted prior to over excavation to estimate extent of soil contamination?	Y	N	N/A	1	2	3
Was adequate field screening performed during the OE activities to identify maximum concentrations? (One soil sample for field screening every 100 square feet of the base and the each sidewall).	Y	N	N/A	1	2	3
Was adequate confirmation soil sampling performed during the OE activities? (One soil sample for laboratory analysis every 400 square feet of the base and 400 square feet of each sidewall).	Y	N	N/A	1	2	3
Is excavation less than 400 square feet of exposed surface?	Y	N	N/A	1	2	3
If the excavation is less than 400 square feet of exposed surface, was a minimum of one soil sample from each sidewall and one soil sample from the base collected and analyzed by a laboratory?	Y	N	N/A	1	2	3
Results of visual observations and field screening presented?	Y	N	N/A	1	2	3
Copies of the analytical data for the soil samples provided?	Y	N	N/A	1	2	3
A scaled site diagram with the following illustrated						
Area of the original contamination	Y	N	N/A	1	2	3
Dimensions and limits of the overexcavation	Y	N	N/A	1	2	3
Field screening sample locations	Y	N	N/A	1	2	3
Location of soil samples submitted for laboratory analysis	Y	N	N/A	1	2	3
Groundwater sampling borehole and well locations	Y	N	N/A	1	2	3
Pertinent site features (buildings, roads, utilities etc.)	Y	N	N/A	1	2	3
Groundwater flow direction	Y	N	N/A	1	2	3
Soil samples shipped to the lab within 72 hours of collection?	Y	N	N/A	1	2	3
Iowa certified laboratory used?	Y	N	N/A	1	2	3
Was the appropriate OA-1 and or OA-2 analysis conducted?	Y	N	N/A	1	2	3
Documentation provided that soil was properly disposed in accordance with 567-chapters 100, 101, 102, 120, and 121?	Y	N	N/A	1	2	3
Land application form documentation provided?	Y	N	N/A	1	2	3